

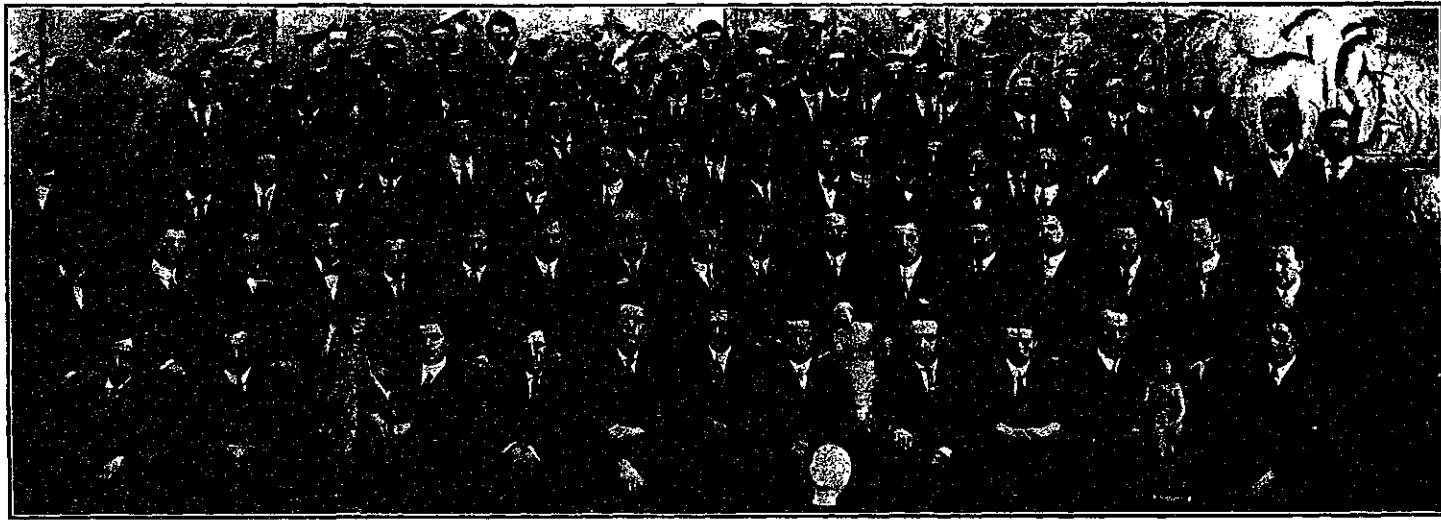
THE TECH

SPECIAL ARCHITECTURAL ISSUE

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BOSTON, MASS., SATURDAY, FEBRUARY 19, 1910

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SECOND, THIRD AND FOURTH YEAR ARCHITECTS.

ARCHITECTURAL COURSE FIRST IN COUNTRY

Department Was Established
At The Beginning Of The
State In 1865

By PROF. F. W. CHANDLER.

The Institute was the first school in this country to introduce a regular course in architecture, and it was among the branches first to be provided for. The Department was established and the chair filled on the opening of the school in 1865, but it was not actually opened to students until the beginning of the school year in October, 1868. No precedent for the association of architecture with a school of science at that time existed, and the intermediate months were fully occupied in preparing the equipment and curriculum with which to make a beginning. The preparation had consisted chiefly in such examination as Professor Ware had been able to give to foreign schools of architecture, with some personal consultation with architects in this country and abroad, and in the collection of casts, photographs, drawings, and other materials.

From its very beginning the Department of Architecture based its methods of instruction upon those of the French. Professor Ware says in the "Columbia University Quarterly," June, 1900. "But the little class which Mr. Richard Hunt started in the Studio Building in Tenth Street when he returned from Paris in 1857, eager to hand on to others the lamps he had there lighted, he of course conducted after the manner of a Paris atelier. This class was the immediate parent of the school at the Institute, founded in 1865."

The principles of our architectural education were based on those of the French school because that nation more than any other of modern times has preserved and developed them in its national school at Paris. These principles demand the necessary artistic training through the atelier, which implies the closest association between professor and pupil. "All the courses might disappear, and the Ecole des Beaux Arts would still be the Ecole des Beaux Arts, while without ateliers, one cannot imagine the Ecole." Then the study of architecture at the French school is at first and above all artistic. It teaches the broad principles of composition and design, which are universally true and applicable, irrespective of

COURSE IN DESIGN PRODUCES LEADERS

Develops Mind, Hand, Eye And
Heart--Is Master Of
His Work

By PROF. D. DESPRADELLE.

The best idea of the method of teaching Architectural Design, which is inspired by that of the world-renowned Ecole des Beaux-Arts-School of Fine Arts of Paris, will be best explained by the enumeration of the second, third, fourth and fifth successive years of study.

SECOND YEAR—Architecture is not begun until the second year. It is in the second year that the students are given the first ideas of architecture; that in a certain way the foundation stone of architectural education is laid. By the faithful copy of fragments of architecture they familiarize themselves little by little with examples of antiquity where both reason and beauty find their best expression. They pass by successive studies of the orders from the Doric to the Ionic, from the Ionic to the Corinthian. It is the study of the orders with their consequent development. They should acquire not only by heart all the dimensions of the examples they have copied, but they should retain sufficiently the proportions to reproduce the sentiment of certain parts of the Parthenon as well as of the Theatre of Marcellus. In a word, it is the a. b. c. of architecture.

At the same time certain beautiful originals are copied, designs of masters, which we are proud to possess. By this method the study of the archaeological as well as of the analytical side of the work of architecture is well started. Students acquire also that first technique so necessary in accustoming themselves to compare, to observe, and finally to express on paper, not an illustration, but to draw a fragment or even a small ensemble in such manner that it suggests the third dimension, or in other words, the architectural work.

THIRD YEAR—The third-year students continue to familiarize themselves with examples always derived from the great classic epochs, but of a higher order, copying less servilely, and in giving to the word "classic" a broader sense they should begin to discern and to understand the signification of the edifices of the past and the proper application of the orders with their proportions. Sometimes comparative

STEEL WORK MAKES ARCHITECTS SPECIALIZE

Hence Structural Engineer Is
Complement Of The
Architect

By PROF. WM. H. LAWRENCE.

Architecture takes its place among the broadest of the professions. Certainly no other embraces wider points of view or demands of its representatives greater diversity of tastes and attainments. Based fundamentally upon the principles of art, and in fact recognized as one of the greatest of the fine arts, architecture nevertheless for its fulfillment requires a knowledge of much that is scientific and calls for the solution of many intricate problems in engineering.

To carry out logically and well an architectural design, to develop it step by step to completion, needs a mind not alone capable of grasping and wisely meeting the utilitarian demands of the problem, but it must be a mind trained to an appreciation of the beautiful, brilliant in creative imagination, discreet in its tastes, and well balanced in its judgment. In addition to these qualities there must be a clear understanding of the methods of engineering so that as the conception of the building grows there shall grow with it a conception of the framework by which it is to be supported. This framework should bear the same relation to the building that the skeleton does to human body. The supporting skeleton and the enclosing form are the two essential elements of the design; each should be the complement of the other, and the harmonious combination of the two is the requisite for a perfect whole. In no other way can there be an architectural composition worthy of the name.

All the greatest and most beautiful of the architectural masterpieces of ancient and mediaeval times are but the refinements of structural necessities. The so-called architectural styles themselves might well be defined as type of the most perfect adaptation of available materials to the requirements, tastes and knowledge of an epoch. It is only necessary to cite one or two examples to illustrate this truth. Take for example the ancient temple; built of stone, low and broad, with massive columns and heavy walls supporting stone lintels of necessarily short spans; simple, dignified, adequate to the needs of the period, and of a wonderful beauty, and refinement of form never surpassed.

FREEHAND DRAWING IS INDISPENSABLE

Architect Must Have Facility In
Sketching--Must Work
Seriously

By PROF. C. L. ADAMS.

Freehand drawing plays an important part in the work of the architect. In planning a construction, in designing a decoration, and in describing a thing to the draughtsman or mechanic, there is always need for facility in sketching. The making of elaborate drawings, and the accurate rendering of ornament and the human figure in design, call for skilful freehand draughtsmanship.

In a school of architecture, therefore, freehand drawing is a professional and an indispensable study. The subject, however, is important not only for its practical application, but for the cultivation it affords. Besides being a skilful draughtsman, the architect must be educated along aesthetic lines. He should appreciate the fine arts, and readily distinguish between the good and the bad in dealing with the art side of his profession. These qualities may be acquired, in a measure, at least, from the study of freehand drawing taught under proper conditions. The work should be carried on in surroundings which of themselves are educational. Constant contact with the best in painting, sculpture, and architecture, is highly important. The student must first be taught the underlying methods and principles of pure freehand drawing. He must work seriously to apply these rather than spend his time in attempting special processes, or in the effort to turn out showy drawings. Practice in memory drawing is very important.

When the student has made progress, however, in pure drawing, there should then be combined with this work a certain amount of drawing which is distinctly architectural, the amount being increased from year to year.

At the Institute the conditions affecting the art side of freehand drawing are exceptionally good. The drawing room or "studio" is large and has ample side and top lights, while the general color effect is cheerful and harmonious. The Department collection of casts affords the best subjects for drawing. The paintings and statuary of the Museum of Fine Arts are always open to our students, and some of the drawing exercises are held in the galleries of the Museum.

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CALENDAR.

Saturday, Feb. 19.

2 P. M.—Freshman Meet in Gym.

Monday, Feb. 21.

1.30 P. M.—C. E. Trip to Cambridge Subway. Meet at Walker Steps

4.00 P. M.—Show Rehearsals.

A leader in point of time, the Architectural Department of the Institute has also been a recognized leader in efficiency in the education of the American Architect. This position has been maintained not only through the excellence of the instruction given but more through the steady adherence to the idea that architecture is not so much a science as it is an art. Connected with a technical school as it is, the Department has been thought to teach architecture namely on its technical side, and not as a fine art. But "a proper course in architecture can never be in so strict a science as a department of a scientific school. It may with great advantage be closely related to a scientific school, and, as in our own case, may draw much of its nourishment from the same sources as the other departments, but is real source of inspiration and ideals is not in science, but in art." The architect makes use most assuredly of the sciences, and would not be worthy for place in the profession without a proper knowledge of their principles and application; but the architect's knowledge of the technical side of his subject should be more general than specific, more to enable him to control and judge wisely the work of the specialist than for his own practice. All the science and all the engineering in the world will not make an architect. His most essential qualities are based upon something else, without which the engineer may still be a good engineer and the scientist a good scientist. The appreciation by the Institute of this necessary difference is what enables it to offer such a course as it here gives a suggestion of; for architecture is looked upon at the Institute not merely as a department of engineering but as a liberal and creative art. Hence the opportunities here for a broad, cultural, and aesthetic training in architecture are as great and of as high standard as in schools connected with universities.

Something of the spirit of the Department is indicated in the articles

which the Professors in Architecture have prepared for this issue of The Tech. It can easily be seen that the aim of the Department is to produce broad-minded men, trained in the fundamentals of their profession. The worth of the instruction is amply testified to by the continued success of graduates of the course, many of whom are leaders in the profession.

Several of the professional societies and classes are to meet soon. Those that will not should do so, even if only to consider the two important matters that the Institute Committee has recently proposed for general adoption. The plan first proposed some time ago, for a finance commission, has already been approved by several organizations. The other plan is the one giving the Institute Committee jurisdiction over the activities so that it may properly fulfill its purpose.

It is hardly possible that the purpose of the first plan will receive any opposition, as the possibility of having, when needed, the advice of a non-student board in financial matters, is one which readily appeals to every progressive activity in the Institute. The only questions that may come up are those in regard to the wording of certain provisions of the scheme.

The other measure, however, might meet with some opposition owing to the fact that it was not properly understood. The idea is to give the Institute Committee definite authority for that which it in theory possesses as the organization in which the students' powers of self-government are vested. The Committee, from its broad and general character, is one which is peculiarly fitted to consider matters of general interest entirely aside from the narrower point which prevails in a single class or course body. Any organization which refused to give the Institute Committee the judicial authority for general matters which it desires would show itself suspicious in nature; in large measure heedless of undergraduate welfare.

The Institute Committee would not concern itself with those matters of the activities in which the general student body was not vitally interested, any more than a State legislature interferes in private business. The Institute Committee, however, should have the right to take action in all matters that affect the best interests of the student body.

Give them this power; give it in such a manner that you show that you, too, are interested in undergraduate life at Technology.

An entertainment such as was given last night is bound to be a dubious affair, but the fact that it was very successful reflects great credit on the entertainment management. It is peculiar that more do not seem to care for a purely amusing evening without real educational value, as is usually given by the Friday evening lectures.

But after the success of last night, it seems that the news will be spread around and more confidence will be placed in the hands of the management. Although last night was a slight financial gain the committee is still a little behind in its status for the year, and it would be well for everyone to do his part henceforward to help the cause along.

Hook night comes March 18th. Keep the date open, and turn out in force that evening.

GENERAL NEWS

TELEGRAPH NEWS OF THE MORNING.

WEATHER REPORT.

Washington, Feb. 19.—Forecast for Boston, and vicinity, fair and colder. Light to moderate northwest to westward winds.

Boston, Feb. 19.—The mercury is expected to drop to within 10 degrees of zero in Boston, with good prospects of a farther drop before Sunday morning.

The storm passed over Boston without leaving any considerable amount of snow in its wake, but seven-tenths of an inch of rain fell, and froze, some of it, leaving the streets and sidewalks a glare of ice.

Zero temperature extends as far East as eastern Canada and South to Cincin-

nati, where it is minus two. The same reading was the record at Chicago, with more to come, for at St. Paul it was 14 below, at Winnipeg 32 below and at Bismarck, North Dakota, 34 below.

GENERAL.

Boston, Feb. 19.—Senator Tillman's condition is alarming. He is unconscious, and those close to the family have lost hope for his recovery. Senator Tillman was stricken on the White House steps Wednesday noon. He was picked up and carried inside. A doctor treated him and he was taken to his home where, yesterday, he showed improvement. Mr. Tillman has suffered several shocks in the last few years, but this is the most severe.

Boston, Feb. 19.—Boston paid tribute to Commander Robert E. Peary, when a representative audience of 3000 men, women and children made Symphony hall echo in the cheers and applause, for the explorer who had come from New York to tell them of the discovery of the North Pole.

The large audience at Symphony hall took a rising vote, calling upon congress to make adequate and appropriate recognition of the great achievement by Commander Peary.

Cairo, Ill., Feb. 19.—With one man dead and five wounded as the result of an attack on the jail by a mob which tried to lynch two negroes, who were arrested for snatching purses from women, this town is seething with disorder.

Gov. Dineen has ordered company K of Cairo to assemble at once and report to Sheriff Nellis, and Capt. W. D. Greaney and his men are now guarding the jail.

Gov. Dineen also ordered the militia.

Resignation from ten midshipmen of the U. S. Naval Academy who failed to pass their semi-annual examinations have been accepted by the Naval Department.

Syracuse allows two hours of college credit to any student who participates in a 'Varsity debate.

The first general call for spring athletics was issued at Harvard. Thirty-two new candidates appeared for base-ball at the cage on Soldiers' Field where twenty battery candidates have been working out since January first. A little later twenty-five of the experienced players will report. Four eights reported to the crew coach. These were put to work on the machines and the other will begin practice in the tank.

Rensselaer Polytechnic Institute has completed a new laboratory for the department of mechanical electrical engineering at a cost of \$415,000.

The University of Toronto has a ladies' hockey team which has won three times this season and has not been defeated.

John White, an Indian, said to be the greatest lacross player in Canada, has been engaged to coach the Carlisle Indian lacross team this year. Lacross has been substituted for baseball at the Carlisle Indian School, and James Garlaw has been elected captain of the team.

Although the number of crew candidates at Columbia has gone up from thirty-four to fifty-one, prospects do not particularly encourage Coach Rice, as a number of the candidates have not the slightest chance for making the crew. Enthusiasm has been lacking all last fall. For a time the freshman crew was disbanded and then when the first year men pledged themselves to support crew, enthusiasm took a rise. Now again the situation has slipped back.

The first general spring call for candidates for crew and baseball at Harvard has been issued. Twenty battery candidates have been working out in the cage at Soldiers' Field since January and to these the recent call added thirty-two more. Those who have had previous experience will be called out in the near future.

Harvard crews have started practice yesterday.

New York, Feb. 19.—A writ of temporary injunction against Louis Paulhan, the French aviator, who has been making numerous flights in this country, was granted by United States Cir-

cuit Judge Hand yesterday on application of the Wright Company of Dayton, Ohio, which manufactures and handles the inventions of the Wright brothers.

Milford, Feb. 19.—When Miss Margaret Preston Draper, daughter of the late Gen. W. F. Draper, is 25, Atty. W. K. Richardson of Nahant is to pay over, as trustee, her share of the estate of more than \$12,000,000 disposed of in her father's will.

Oakland, Cal., Feb. 18.—Word has been received here from San Lorenzo that the Trojent Powder Works has been wrecked by an explosion. Several persons are reported dead.

WASHINGTON.

Washington, Feb. 19.—All hope that the missing United States Navy tug Nina, which left Norfolk Feb. 6, bound to Boston with thirty-two souls on board, is still afloat, has been abandoned by the Navy Department, and today the warships which for five days have been searching for the Nina were ordered to discontinue their hunt.

Washington, Feb. 19.—There was a hearing before the House naval affairs committee on the bill of Representative Roberts authorizing the President to appoint a commission to adopt rules and regulations for the wireless telegraph business. The bill is favored by army and navy officers and wireless telegraph companies. It is opposed by various wireless apparatus manufacturers. A great army of amateur wireless experimenters throughout the country are up in arms against the bill and were represented at the hearing by counsel. D. R. W. Murdock of Chelsea, Mass., and Walter W. Massie of the Massie Wireless Company of Providence, attended the hearing.

FOREIGN.

London, Feb. 19.—Prof. Sir William Ramsay, the noted chemist, discussing polonium, says that Mme. Curie does not pretend to have done anything more than separate a larger quantity of the metal than was ever previously separated. He was pleased at her success in obtaining the quantity she secured, but he feared that science would not be helped much owing to the rapidity with which polonium decays.

London, Feb. 19.—A manifesto of the Labor party, which has been sent to Premier Asquith, is generally accepted as an ultimatum; that in the event of this protest being disregarded, the Laborites will vote against the government, and coming on top of the evident difficulties which the ministers are encountering in their negotiations with the Nationalists, it created an almost panicky feeling among the Liberals in the lobbies of the House of Commons this afternoon.

Lima, Feb. 18.—Preparations for war continue on the part of both Peru and Ecuador. The trouble grows out of the boundary dispute between the two countries. The only hope of foreign merchants is that the United States will intervene and prevent hostilities, which would mean the absolute ruin of both Peru and Ecuador.

Gondokoro, Sudan, on the Upper Nile. Feb. 19.—Colonel Roosevelt, Kermit Roosevelt and the other members of the Smithsonian African Scientific expedition arrived here yesterday. All are well and enthusiastic over their experiences and the scientific results of their explorations.

Quellon, Chile, Feb. 19.—The Chilean tugboat Pisagua arriving here reports that the Chilean cruiser Ministro Zevallos has rescued the eighty-eight persons who had been left on the wreck of the British steamer Lima in the Huainblin Passage, Strait of Magellan.

Santiago, Chile, Feb. 19.—Dr. Frederick A. Cook has admitted his identity. He visited his old comrade, the Belgian engineer, Rysselberghe, and the two were together for some hours.

The two men were members of the Belgian Antarctic expedition of 1897-98, and the engineer recognized Cook when they were fellow-passengers on the steamer from Valdivia. Until now, however, Cook had refused to recognize his former companion.

COURSE IN DESIGN

(Continued from page 33.)

studies permit a clear comprehension of the relation of edifices and architectural evolution, and a penetration of the spirit of civilization and art. More often little problems repeated several times each term are given; as for example, "An Entrance to an Administration Building," "A small Museum," or "Some Special Dwelling House," etc., requiring a choice of appropriate elements, in order to use their initiative. So that in place of making drawings to a single scale almost arbitrary, as in the preceding year, they make in the first place a little ensemble, with the different means of representing plan, facade and section; then at times, the most important portion to a large scale. This last well-developed part is not presented barrely on the drawing-board as the trade-mark of a haphazard production,



PROF. D. DESPRADELLE.

but well-drawn and rendered in every detail, and arranged in a frontispiece in such a way as to inspire in the students ideas of structural decoration.

During the course of the different exercises or problems, the elementary principles of composition are given by individual criticism. The different processes of expression are presented and criticised. Students acquire a technique varied, broad and flexible, and at the same time a beginning of a method simple and ordered, permitting the intelligent approach of an architectural problem. It is only when that important and indispensable third year has been thoroughly followed that the student has the proper equipment to derive real profit from the fourth year course.

FOURTH YEAR—In the fourth year more liberty is given the students. They are no longer limited by Greek and Roman art and a few examples of the Renaissance. The Romanesque and Gothic epochs, the Renaissance of the different countries and the best examples of the 17th and 18th centuries, as well as of the intermediary epochs are opened to them.

"Composition" now becomes the key note of their efforts. They are made to understand that a "work of architecture" does not consist in the juxtaposition of examples taken servilely from European buildings or of their arrangement in mosaic, but that above all it is necessary to make a judicious and appropriate choice of the elements at their command, and to arrange them in an harmonious manner, that they may be members of the same family, and that they may convey a definite meaning.

They must understand that they are not to make a church, a library or a large shop, when the subject under consideration is a public bath, a casino or a private house.

They must understand that the first preoccupation of an architect is to establish with simplicity and logic a reasonable and practical disposition of his plan with the different services, as well as to express the destination and purpose of the edifices, taking into account surroundings, climate, and materials, and giving to the interior of the building, as well as to its facades, a decorative treatment at once homogeneous and appropriate. The customs and habits of the locality should be considered also, together with the aspirations of the people in whose midst the building is to be erected. With this aim in view the problem is presented with freedom of interpretation and a choice of inspiration which the character of the subject may suggest.

Problems of three and five weeks' duration alternate with short problems called "esquisse-esquisse" made in two days. These last consist in the development and intelligible presentation of a small subject without criticism from the instructor, except a few general remarks. Such an exercise develops decision and initiative obliging the student to formulate ideas with celerity and care.

But the chief exercise of the course is the problem of longer duration which is presented as follows:

On a certain date a program is delivered. A Club House, for example, with all the requirements for such a subject.

The student is given two afternoons to express in a succinct manner the principle of his composition without the help of the instructor. He then gives the instructor his original while keeping for himself a duplicate.

Preserving and respecting the principle of the sketch it is developed under the instructor's guidance by repeated criticisms and the exposition of the principles of composition permitting the student to give a precise form to his thought.

Upon the completion of the problem a general exhibition of all the drawings, plans, facades, sections, and sometimes perspectives or details, takes place.

A judgment establishes the order of merit, followed by a general criticism before the entire class in the form of a resume which brings the exercise to a definite conclusion.

Such an exercise, the last week of which all students, third, fourth and fifth years, work practically together and aid each other in the most fraternal and admirable way, is beneficial to everybody; bringing to light the different points of view and developing the in-

dividuality. It is the typical and most important exercise at the Institute, as it is at the Ecole des Beaux-Arts in Paris, from which methods are borrowed, and adapted to conditions of this country.

The second term of the fourth year is practically devoted to the thesis, the final point of the regular studies; that is to say, by a more profound study of a subject developed in all its parts, chosen by the students themselves, in which they examine exhaustively the different technical sides of the problem.

FIFTH YEAR—Beyond a question the diploma awarded at the end of the fourth year is of great significance. The knowledge of the young architect is precious, as the professional success of generations of students testifies. It is easy to see, however, that with such a program of study as that demonstrated above, a program imperiously imposed by the conditions of modern life, the time of preparation for the important and complex role to be filled by the architect is all too limited. The way is but half achieved. Scarcely five, or at most six months have been given to acquire and assimilate a knowledge which should become a beacon and not a burden, exacting a devotion of as many years as in the great centers of study in Europe.

So clearly recognized did this need become that a fifth year of study was established at the Institute, of which the results from its debut have been most satisfactory.

Although an appreciation from the professor in charge is somewhat delicate, yet things must be explained. Facts are facts. Theoretically and practically from the outset the fifth year has been a success. It has become an important factor with the students; it has raised the standard of architectural education in America, and it is regarded as a necessity by experts both at home and abroad.

The number and importance of the problems of the fourth year being of necessity inadequate, owing to limited time, the plan of work for the fifth year embraces the more profound study of the types of edifices and compositions which explain or resume the many and varied manifestations of a great people; as for example, a courthouse, a city hall, important residences, hospitals, churches, large assembly halls, theatres, a university, bathing establishments, establishments for the people, commemorative monuments, etc., etc. To which are added "esquisses-esquisses" of 12 and 24 hours "en loge," and special problems for the study of works in different materials, metal gates, doorways of wood, a church pulpit, the interior decoration of a public hall, of a private residence, to cite a few examples.

A larger place is given the plan, which is of capital importance; indeed the foundation in considering an architectural problem.

Much time is devoted to theoretical and practical study, together with a comparative study of the different classes of architectural compositions; as for example, compositions compact and dispersed, private and public, open-air compositions, edifices of administration, charity, education, and those of purely business utility; bridges, squares, public gardens, the layout of a town; plans comprising several buildings upon flat

sites, upon declivities, at the sea side, etc.

Numerous illustrations of edifices are presented together with an analytical revision and an archaeological resume of the great periods of art in the several orders, administrative, glorious, religious, and domestic. Such as Greece with its temples, Rome with its forum, baths and triumphal arches; the Byzantine, the Romanesque and the Gothic periods. The imposing manifestations of the Renaissance, the 17th and 18th centuries in France, not omitting the best examples of the 19th century, restorations of the antique, and the concours of the Grands Prix de Rome which so well resume many principles eloquently demonstrate the application of the lessons of the past to the manifestations of the present.

Students in this course are enabled to devote practically the whole time to architecture proper. Every problem is studied on all sides, practical and aesthetic, and is synthesized as a perfect and well-proportioned organism. Repeated studies are made until plans, facades, sections, and details harmonize, unite, and support each other, as the skin clothes the body leaving the form and structure beneath to be divined.

Resume.—Commencing with the classical grammar of architecture which defines so simply the architectural work, the past is studied in all its forms, historical, structural and aesthetic, and the lesson to be derived therefrom together with what is transmissible from one generation to another, is sought. Quality of draughtsmanship and design is constantly developed in order that the architect may express his practical ideas in a complete and artistic manner.

The transformation of architecture and the styles under the influence of religious, philosophical, and social currents, are shown by repeated criticisms and lectures.

By varied problems, academic, semi-classic, romantic, mixed or modern, the creative and imaginative faculties of the student are awakened. A man is formed with an equipment which permits him to discuss intelligently, pencil or brush in hand, with all his collaborators; engineers, constructors, decorators, sculptors, etc.

By developing the education of the mind, the hand, the eye, and the heart, a well-informed man of the present as well as of the past is produced. A man having at command a means of expression which permits his approach to all the problems of modern needs, one who formulates his thought with clearness and who is abreast of his time and of his epoch; he is endowed with the precision of the engineer, the soundness of mind of the man of business, and the imagination of the artist. In other words a leader in the accomplishment of architectural work. The "Maitre de l'oeuvre," not a specialist. A man useful and indispensable to his country.

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STEEL WORK

(Continued from page 33.)

Contrast with this the Gothic cathedral mediaeval times; still of stone but a type far different from that of the early temple; the change being due primarily to a knowledge of the principles of vaulting, the use of the flying buttress, the introduction of glass, and the vastly different conditions and requirements of the age. But the character of the cathedral as well as the temple was fixed by the structural framework, and is in its essentials but the results of the refinement of lines and masses imposed by conditions of equilibrium. This does not imply for a moment that the architect gives his first thought to the structural details of the problem. Quite the contrary is probably true, and rightly should be; but the properly trained mind will have a clear conception of the structural possibilities and their limitations, and this will be a dominating influence in the development of the design.

In modern times, and especially within the last half century, the conditions have become so complex, the possibilities so great, that the structural limitations on plan and form which governed and guided designers of the early ages can no longer be said to exist. The introduction of rolled steel shapes opened the way for wonderful changes in architectural methods. Buildings hardly dreamt of before became commonplace affairs. There seemed almost no limit to what could be done. Structures could be carried with ease and rapidity to heights taller than the tallest monuments hitherto erected. Architecture, at least in this country, went crazy, and it was not altogether the fault of the architect. He was simply the victim of circumstances, of the influence of the age in which he lived. The congestion in the great cities, the enormous value of the land in business centers, the demand for higher buildings to bring through greater floor areas larger returns on investment, and finally the coming of the new material, steel, by means of which this demand could be satisfied, were factors working to bring about the change. The age was one of speed and hurry. There was little time to deliberate. The architect was forced to plunge in, and soon found himself beyond his depth.

The new conditions had been thrust upon him suddenly with no opportunity to prepare for them. The problems that arose in the construction of the new type of building could not be solved in a minute. On the structural side they were complex and beyond his knowledge. It required all his time to plan the general arrangement of the building. From the artistic standpoint alone it was a new and engrossing problem. He needed help, an associate architect specializing in engineering who could work in conjunction with him. The problem had become too big for one man to cope with; architecture had reached a point where her representatives must be specialists. But there were no architectural specialists in construction; they had not been needed up to this time. So the architect did the best he could do under the circumstances; he turned the structural half of his problem over to another profession, that of the civil engineer, contenting himself with what was left, and giving little thought to the way in which the building he was designing would be supported. Anything could be built in steel; its adaptability was practically unbounded; that part was the engineer's problem, and it was usually left to him. The architect did not understand the engineer, and the engineer neither understood nor appreciated the architect. The true function of the structural design was lost. The relation between the skeleton and the form no longer existed. The architectural sense became paralyzed by the suddenness and enormity of the changed conditions; some frightful architectural anomalies were perpetrated. Architecture became a sham: Buildings masquerading as heavy stone structures proved upon examination to be thin terra cotta envelopes supported on slender steel columns; the apparently heavy walls and piers turned out to be purely ornamental, and instead of helping to support the building were simply so much added weight to be carried by the steel columns of which their massive appearance gave no suggestion. All reasonableness of architecture had disappeared. Old forms belonging to far different types of struc-

tures were plastered without reason to a slender metal framework which of itself may have had no unity, and whose only purpose was to support the freak conception of the designer. Such structures could be made to stand, to yield comfort to those who lived in them, to return proper rentals to the owner, and to the casual observer to present nothing objectionable or unpleasant to the eye; but considered from the point of view of sound architecture they remain as insults to the profession.

The influence of such conditions was naturally felt much more strongly in this country than in Europe. We had few traditions of art. Our people as a whole cared little about architecture, and knew even less; they were satisfied with a purely utilitarian solution of the problem. Even our architects had for the time being lost their heads; yet the structures built under these influences, bad as they are, have a meaning and a function in the general progress. They represent the first steps in the working out of a new type.

Fortunately, we are gradually recovering our normal balance. The confusion of the new age is beginning to clear, and many earnest efforts have in recent years been made, with more or less success, to devise a form of building that should adapt itself logically to the framework of steel. The architect is learning more of engineering, the engineer is becoming more and more of an architect, and each is beginning to realize that to do anything really worthy of the name of architecture they must work in the closest relation. Many architects are specializing in structural work, and there is a steadily increasing demand for men educated as architects but with a thorough training in engineering principles and methods.

We are still a long way from solving the architectural problem involved in the use of the new material, and it will be many years before the solution is so well established as to mark another epoch in the history of architecture and to merit the name of a new architectural style. But the time has long since gone when one man can hope to specialize in both branches. Like the old family doctor with his one horse chaise and his bag of medicines ready to care for all human ills, the old-time architect has passed. It is an age of specialists in all professions, and to-day architecture naturally divides into two great branches, the first of which for want of a better name may be called the aesthetic branch, the second the structural. These two are so intimately related, so closely interwoven, that one is a necessary complement of the other, and no man should be called an architect who is not master of at least the basic principles of both.

With this point of view in mind the course in architecture at the Institute is divided into two options, one leading to specialization along the aesthetic lines, the other along the structural. The structural work in the Department is arranged to provide instruction suited to the needs of both options. In order that all students may have a knowledge of the fundamentals of the structural side of their profession, the preparatory study leading to the structural courses is practically the same for both options during the first two and one-half years. It includes mathematics, physics, and applied mechanics. At the middle of the third year the work of the two options diverges, becoming more and more practical in its application in each as it proceeds, but varying very much in the amount of time devoted to it in each option.

In the aesthetic option the time diminishes in relation to that given to the aesthetic courses, the required structural work ending with a course in elementary constructive design in the first term of the fourth year. Opportunity is offered however, to continue this course through the second term, the work being optional with that in fourth-year modeling. More advanced structural courses may also be taken by the graduates of the aesthetic option who return for a post graduate year.

In the structural option the time devoted to structural subjects relative to that devoted to other work, increases very rapidly from the point of divergence of the two options, until during the senior year by far the greater part of the student's time is taken up by the study of his specialty. Although the work in applied mechanics, strength of materials, and mechanical laboratory is taken in the Department of Applied Mechanics, and that in materials, foun-

FIRST IN COUNTRY

(Continued from page 33.)

style, country, or methods of building operations. The instruction is general, not specialized. It seeks to implant in the mind of the student the great truths that underlie architectural composition, to teach him to apply these truths by training his taste, developing his individuality and imagination. The system neglects neither science nor technique. The study of the laws and methods of construction holds a most important place. In a word, it endeavors to produce artists made useful through sound preparation in all the difficulties of the profession, giving them adaptability that will enable them to round out easily their stock in trade when later choice or circumstances will decide the direction in which their work shall lie. The wisdom of adopting such methods, as the Paris Beaux-Arts pursued, and to aim at attaining its high standards, has been proved through the entire life of the Department. In the general plan of instruction few changes have been made or demanded during all these years except for a simple modifying of the older courses, and aiding others as required and an alertness to strengthen it along the original lines due to the natural growth of the school.

We have added the Option in Architectural Engineering, the history of which is told elsewhere. We believe that no man can be a thoroughly trained practising architect without some knowledge of engineering. We further believe that the most artistic students should have no excessive difficulty in absorbing the mathematics necessary to understand those structural necessities which are the basis of any worthy architectural design. The pupil is taught that unless the constructive principle of his building influences his design he is a decorator and not an architect.

Our graduate class is an established fact, and the work it accomplishes after it has been relieved from the general studies is always remarkable. The practising architect always asks first for men who have had a year of this kind of work. The course in architecture should really be for five years, and the Bachelor's degree should represent the standard of the present Master's.

Our growth may be shown by our different removals. Our quarters became too small for us in the Walker Building and a new building was put up for the Department on Trinity Place, and was called the Architectural Building. This seemed very large at first but not only our members increased but we had been accumulating a valuable plant, library, drawings, etc., which the fire of 1898 had greatly jeopardized, and it was very desirable for us to occupy a fire-proof building. Another move was made in the fall of 1898 into the Pierce Building, just then finished, and here we are at present. In 1906 further changes in our present rooms were made to bring our classes more closely together and more in touch with all the instructors in order to still further make for the atelier spirit or enthusiasm which we are so proud of having, and without which the choicest curriculum on paper counts for little. We again want more room. We want to extend our field, and interest the community at large in what we are doing.

ditions, and theory of structures in the Department of Civil Engineering, yet the course in structural design, which occupies practically every afternoon of the senior year, is given in the Architectural Department. All the problems are studied from the architectural view point. The work is done in the large drawing room where the student finds himself closely associated with the students of the aesthetic option and in an atmosphere emphatically architectural. Thus the instruction never ceases to be that of the architect, and the student of whichever option is imbued with a love and appreciation of the beautiful, which is, after all, the foundation of all things in architecture. The art element is the one essential without which the architect cannot exist, and the man who elects structural architecture for his profession should be one to whom the beautiful in art makes a strong appeal. It is an essential part of his profession; without it he may make a most excellent engineer, but an architect, never.

FREEHAND DRAWING

(Continued from page 33.)

The basis of all branches of freehand drawing is representation in black and white of the immediate appearance of objects. The principles, methods, and forms of practice which relate to such representation constitute the subject of pure drawing. The medium best suited for use in this study is charcoal. Broadly speaking, the methods of pure drawing concern observation and supplementary methods of verification, as perspective, anatomy, etc.

Fundamental processes of pure drawing are taught in connection with the courses in lettering and object drawing, taken by all first-year students. The early work in the Department of Architecture is but a wider application of these processes. The students work first from casts of ornament. These subjects are followed by casts of parts of the human figure, the whole figure, and portions of the Parthenon frieze: occasionally opportunity is given to draw from life. Throughout this work stress is laid upon generalization and accuracy in observation, and upon simplicity in the treatment of the drawing. The construction of ornament based on plant form is pointed out, and a certain amount of anatomy is taught incidentally. Frequent exercises in memory drawing are given.

As bearing on architectural methods, work with the pen, pencil and brush is introduced from time to time. To the same end, the size of the drawing is frequently changed. Ordinarily the drawings are made to fill 19x24 charcoal paper. But if confined to this, or any other size of drawing, the student is quite likely to do poorly if called upon to vary the size. Accordingly, in working from the human figure, any height of drawing between 1 inch and life size may be required.

The time in which a drawing is made is also an important question. In getting out a competitive drawing, in sketching, and from a business standpoint, the architect must generally draw not only effectively but rapidly. A certain amount of drawing subject to time limit should be therefore be included in the school training, and this need is met in the Department by exercises in time sketching. Thus, for example, when sketching from life the pose of the model may be changed five or six times in an hour, the student meanwhile making the same number of sketches, and of a size about 1 1/2 inches in height.

It is of course impossible to represent much detail in this short time, and this fact constitutes another valuable feature of the practice, namely, the seizing of essentials, and, consequently, the ignoring of that which is relatively unimportant.

A course in clay modelling is given in the Department which effectively aids in teaching the freehand drawing.

In the third year the work follows lines similar to those of the second year except that the amount of life drawing is increased, and, of course, the standard of rating is higher. In this and the fourth year the technique of architectural pen and pencil rendering is taught in a separate course.

The fourth-year men work from the nude. The model is frequently posed to suggest the use of the figure in decoration, and in this connection a certain amount of latitude in idealizing the figure may be permitted. A specially designed stand is used for posing the figure in reclining positions. It consists of three concentric cylindrical surfaces of 90°, each of which can be used separately, fitted with sliding seat and foot rest.

The graduate course offers advanced drawing from life and figure composition. If the work from the figure the drawings are made life-size, and are studied more in detail than in the earlier work. The figures in the compositions are adaptations from the life models. The motif for a design having been announced each student works out his conception in sketch form. The life models are then posed as necessary for the execution of the design.

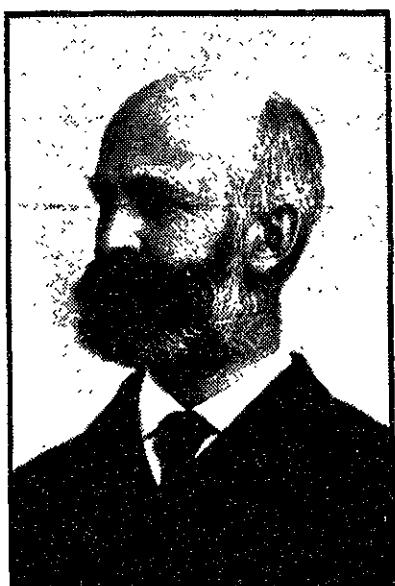
For several years past each graduate class has designed and executed a portion of the frieze in Huntington Hall, typifying the arts and sciences taught at the Institute. This work has been under the immediate direction of Mr. W. Felton Brown, and the result is a credit to both students and instructor.

**COURSE GIVES A
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**Training In Fine Office Very
Valuable And Gives Good
Reputation**

By PROF. F. W. CHANDLER.

The first efforts to become acquainted with the routine of his professional line may lead the graduate in architecture to wonder why more of the elements affecting this routine were not made part of the school's curriculum, and he will wish perhaps that more of his summer vacations had been spent in clearing away part of this early inexperience through acquaintance with the architect's office. But it is too late for that now, and the time has come to prove himself possessor of the strongest qualifications in the making of an architect,—backbone and common sense. He will soon learn the impossibility of any school giving him practical experience other than of the most meagre sort, and later will see what a waste of time it would have been to attempt to parallel a course which he is bound to have in the office, and which needs the conditions of a practical demand to get the real life into it.

If he is fortunate enough to have the training of the graduate year he will appreciate at once its value, from the importance his employer places upon it, a value which the young draughtsman will feel in the assured power it has given him to deal with big things, and to look even at small things in a big way. It will lead to his being associated with schemes, to take an important part in competitions. This is



PROF. F. W. CHANDLER.

the kind of training the architects want from the schools, which results in the ability to handle problems, to educate architects in fact, not draughtsmen. An office education does not cultivate such powers, and the time is all too short in the schools to nourish and strengthen the faculties of idealization and creative composition to take from it more than will prepare for the merest start in office routine work.

As the young draughtsman settles down on hard-pan he will also see how really his preparation for the profession of architecture. He will see how lacking in life his text-book with its theoretical knowledge seems, until he has a good working acquaintance with the practical conditions of building materials when its value will shine forth. So big and splendid is the profession that he will soon learn that the greatest value of his schooling here was in giving him the right start; that each class in these progressive years as it goes forth is bound to meet different conditions from those encountered by its predecessors: that the extent of knowledge required by an architect seems to increase in an ever progressive ratio. These conditions our young draughtsman can only learn by his own experience, but they won't upset him for he is young and ambitious, but in these early days he will do some serious thinking, and will draw heavily on his

(Continued on page 40.)

SOCIETY A SUCCESS
**Has Maintained Position Of
Usefulness**

On the 20th of October, 1886, a few students of the Department of Architecture met in Room 21, Rogers, which was then the only building belonging to the Institute, for the purpose of forming a sketch club. This soon developed under the name of the Architectural Society of the Massachusetts Institute of Technology into an organization for the advancement and improvement of its members in all matters pertaining to architecture. A proposition to start an architectural paper "to contain cuts of the first-mention drawings" of the department, etc. resulted in the Technology Architectural Review which remained under the management of students until taken over into private hands in 1889.

Another proposition made at this original meeting was to accumulate tracings of rare plates from which prints could be sold at cost to members of the Society. Tracings were made by members, who for some years devoted much time to this task. As facilities for obtaining good reproductions, etc., increased, the time devoted to making tracings was reduced until at the present time one tracing is required from each member as a condition of entrance to the Society. The Society, however, has today in its possession some eight hundred tracings, films, and plates of most valuable examples, from which prints may be obtained at a nominal price by any member of the Society.

Of particular interest was the "Year Book" or "Annual" which was published for fifteen years, beginning in 1891, by the students of the Department through the Architectural Society. It contained illustrations and records of the premiated drawings in the courses of Architectural and Structure Design and also of the current work in Freehand Drawing, pen and pencil, modelling, etc. It grew steadily from a small pamphlet of a few pages to a book bound in board covers and numbering one hundred and sixty pages.

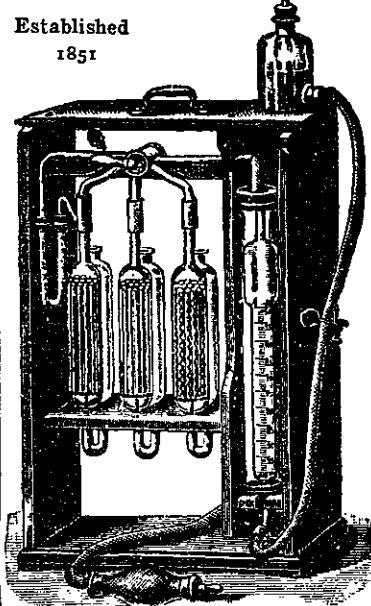
An important result of the publication of the Annual was the establishment in 1906 of a fund, the proceeds of which are to be devoted to the use of students of the department requiring financial aid. Two hundred dollars was set aside to be added to the net proceeds of publications of the Society until the sum of one thousand dollars was reached when the income from that and from any additional funds should be used for scholarship purposes. The fund has now reached eight hundred and ninety-five dollars, leaving only a little over one hundred dollars to be raised before it is available for scholarship purposes.

The Annual had become so important a factor in bringing before the public the work of the Department, that in 1907, it was enlarged to become quarterly with the title of The Technology Architectural Record. In addition to the usual illustrations there are editorials, accounts of the smokers and other doings of the Society, contributed articles on design and construction, as well as extensive alumni notes. The present Volume III, introduced the reproduction of contemporary work of alumni in addition to the work of students and also a department devoted to the results of experiments and tests in the Institute laboratories having to do with modern methods of construction. The Record is emerging from the experimental stage and is taking its place among the recognized architectural publications of this country.

Regular meetings for discussions, smoke-talks by practising architects, sketching parties, exhibitions, dinners, and receptions have been the regular work of the society since its foundation.

The Architectural Society has made a record to be proud of. It has grown to a successful organization, has founded a fund to aid deserving students, and through successive publications has maintained a position of usefulness and development in the Department.

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CHEMISTRY DEPARTMENT
HONORS MRS. STINSON
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Years Service
Given

It is rare that on Institution can command the services of an efficient assistant for a continuous period of forty-five years, yet Mrs. M. E. Stinson, who has charge of the chemical supply room in the large laboratory on the top floor of the Walker Building, today completes her forty-fifth year of service. She entered the employ of the Institute before Rogers Building was built, and at a time when the instruction was given in rooms on Summer St., and has been at her post almost without a break of a single day ever since.

In the earlier days of the Institute in particular, she became well acquainted with every student taking the first-year course in general chemistry, and still retains her unusual memory for names and faces, which always is the delight of students of long ago who hold her in high respect and always visit her on their return to Boston.

In recognition of this unusual event the members of the instructing staff of the Chemical Department and a few of Mrs. Stinson's friends immediately connected with the Institute surprised her by decorating her room with flowers this morning and by presenting her with one hundred dollars in gold for her personal use, as a token of the appreciation and affectionate regard in which she is held by all who know her. Her life has been and is one of loyal and efficient service to the Institute and to countless individuals. Many a homesick freshman has she comforted at a critical moment, many a damaged worker has she repaired and sent back to his labors, and many a senior has left the Tech for his life work with better courage and greater enthusiasm because of Mrs. Stinson's God-speed. Her thousands of friends, new and old, will rejoice with her and wish for her many years of health and happiness.

TRIP TO NEW SUBWAY

C. E. Society Members Will Go To See Cambridge Subway

The Civil Engineering Society will begin its program this term with an excursion to the New Cambridge Subway, which is now under construction. The trip will be made Monday afternoon, Feb. 21st, and the members of the party will meet on Walker steps at 1:30 p. m.

This excursion will offer an opportunity to members to see a very important kind of civil engineering work under way, and moreover, a piece of work which is of considerable interest to residents of Greater Boston. This subway is being built to connect Boston with Harvard Square, Cambridge, giving rapid transit to residents of Cambridge and outside towns.

The Civil Engineering Society has recently taken into membership a large number of second-year men, and the excursion is, of course, open to them as well as upper-classmen. The fact that second-year men have not entered into studies directly bearing on subway and tunnel construction is no bar to their gaining many interesting and instructive points from the excursion. Prof. Russell emphasized this point particularly, the other day, when asked of his Second-year class in stereotomy. He said that he considered the lectures and excursions of the Society a valuable opportunity for all members of the Course I. of whatever year they might be.

THE STUDENTS' DRUG STORE
Under Copley Square Hotel.

We make a special effort to merit the patronage of our student friends. Don't forget the address under the Copley Square Hotel.

1913 TRACK MEN WILL COMPETE THIS AFTERNOON
Winners Will Go To Make Up
The 1913 Class Track Team
For Class Meet

This afternoon at the Gym the Freshmen are to hold an indoor track meet among themselves to determine what men lead the class in athletic ability. From the winners of the different events a class track team will be picked to compete with the Sophomores. The Freshman have been showing good spirit in track work and a number of them are going to make good bids for 'Versity team positions a little later in the spring.

There are eight events to be run this afternoon which will include practically all the indoor events except the broad-jump. The quarter-mile is the most popular event, although a good number are entered in the 35-yard dash and low hurdles. Nearly all the relay team men have kept up their training and are in fine condition. The majority of them are quarter-miles and this event will probably be hotly contested. Nothing wonderful is expected in the way of times, but the performances will give Coach Kanaly a better chance to see what men have prospects ahead of them in the track-team line.

The Freshman-Sophomore meet next Saturday is expected to stir up a good deal of class spirit. The Freshman, so far, have a decided advantage, having captured Field Day and the basket-ball championships. If 1912 wins the track meet, it will leave things a little less one-sided and open the way for a keen rivalry in the class base-ball series.

The entries for this afternoon's meet are as follows:—

440 ard Dash—M. D. Taire, H. G. Burnham, R. D. Bonney, W. L. Whitehead, J. J. Strachan, C. F. Cairns, W. N. Eichorn, R. C. Thompson, W. R. Mattson, B. S. Munch, G. R. Alden, R. S. Gans.

35 Yard Dash—J. J. Strachan, W. de Y. Katzenberger, R. S. Rankin, C. F. Cairns, W. N. Eichorn, K. D. Hamilton, A. R. Atwater, J. Bernhard, G. R. Alden, C. E. Trull.

35 Yard Low Hurdles—H. G. Burnham, L. S. Hubbard, C. G. Fallon, S. M. Baxter, W. N. Eichorn, K. D. Hamilton, B. S. Munch, C. F. Cairns, C. E. Trull, R. S. Rankin.

Mile Run—H. D. Peck, R. D. Bonney, G. P. Capen, A. S. Milliken, W. R. Bylund, R. W. Weeks, C. W. Brett, N. H. Poor, H. B. Horner, L. C. Hart.

16-Pound Shot Put—R. M. Freeman, N. D. MacLeod, C. F. Cairns, W. N. Eichorn, G. T. Lane, K. D. Hamilton, J. K. Batchelder, A. T. Gibson.

High Jump—L. S. Hubbard, C. G. Fallon, N. D. MacLeod, S. M. Baxter, K. D. Hamilton, W. R. Bylund, G. R. Pardey, C. F. Cairns.

Pole Vault—H. D. Peck, N. D. MacLeod, R. S. Rankin, J. Balch, Jr., J. G. Sado, G. A. Taylor.

THE ARENA

Last year the Tech-Tufts relay at Medford was close, Tech won in the last few laps. It is thought that the tonight will be even more of a struggle for Tech to win. However, here's wishing the team the best of luck.

The Harvard-Yale hockey game is scheduled for this evening at New York. Harvard is picked as the winner.

Speaking of hockey, Technology didn't do half bad this season. The team split even on its schedule and Manager Billings reports that hockey supports it self financially. That's saying quite a bit for an Institute activity.

The basketball team plays Williams Monday night. Williams has a championship team and the outcome of the game seems to be that Tech will lose, but we'll hope that the difference of the score will be small.

As a result of Princeton winning the intercollegiate hockey championship, the University "P" has been awarded to the members of the hockey team.

INSTRUCTORS' PAY SMALL
No Chance To Get Married On
\$500 A Year They Say

The recommendation, made in Prof. Jackson's report, that the faculty raise the pay of young assistants and instructors has, needless to say, aroused considerable comment. The young men acting as instructors at the Institute receive a salary of only \$500 a year as compared with Harvard's rate of \$800.

In an interview given one of the Boston dailies, Prof. Jackson showed up the fact that the salaries are too small for the instructors to get married on. In fact they are almost too small to live on, even with lunches selling at 20 cents in the Union.

An instructor, whose name is not stated, told a newspaper reporter that he would not object to getting married, but couldn't see how it could be done on his present pay. "However, I am living in hopes," he said, "and so is my girl."

PROF. JACKSON SPEAKS

In a joint meeting with the American Society of Mechanical Engineers, the

American Institute of Electrical Engineers heard Professor Dugald C. Jackson, Messrs. Chas. T. Main 1876, R. S. Hale 1898, G. H. Stickney, and Walter B. Nye on the various phases of the application of electrical power to industrial power. The meeting was held at the Boston City Club on the evening of Feb. 16, and many of the Institute under-graduates were present in the audience.

WHO WAS GUILTY?

An article in last night's paper tells of a Tech senior who was so engrossed in his thesis work that he forgot to go to a dance to which he had invited a young lady.

The story was told that he had been working all afternoon on his thesis and in the evening he started to take a bath preparatory to dressing for the evening affair. His mind was so wrapped up in his thesis that after taking his bath he got into bed absent-mindedly instead of dressing.

The next morning his family asked him why he did not go to the dance. It was the first time he had thought of it since he got into the bath-tub, but his only comment was, "I wonder how long she waited for me to call for her."

One has to work his imagination overtime to believe this story literally.

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NOTICES

FRENCH I.

Exercises in this subject are held as indicated below. Students who can attend with Section a are assigned thereto; those who can not are assigned to Section b.

Subject	Hours	Room	Instructor
French I	Sec. a	Monday 10-11	Mr. Erhardt
		Wednesday 9-10	
		Friday 2-3	
Sec. b	Monday 4-5	29 Lowell	
	Wednesday 4-5	23 Lowell	Mr. Dike
	Friday 4-5	23 Lowell	

SPANISH I.

The section of Spanish I reciting to Mr. Erhardt will be designated as Section a. A new section to be designated as Section b is formed to recite to Professor Bigelow on Mondays and Fridays from 4 to 5 in Room 31 Lowell.

FRENCH II, SECTION 6.

This section is divided into two sections, as follows:

Section a	Section b
A-S	T-Z
Section a will recite as heretofore to Mr. Dike.	Section b will recite to Mr. Blachstein,
as follows:	

Tuesday, 9-10, Room 22 L.
Thursday, 10-11, Room 24 L.
Friday, 9-10, Room 31 L.

C. E. SOCIETY.

C. E. SOCIETY EXCURSION TO VISIT CONSTRUCTION OF NEW CAMBRIDGE SUBWAY MONDAY, FEB. 21.

Meet on Walker Bldg. steps at 1:30 P. M. SHARP. Those intending to go sign sheets posted in drafting room or leave name for Secretary, Box 36 at Cage before Monday.

GYM TEAM.

Picture to be taken at Marceau's, 160 Tremont St., Sat., Feb. 19, at 1:30 P. M.
R. W. JACOBY, Mgr.

E. E. SOCIETY.

Prof. A. E. Kennelly of Harvard will speak on Wireless Telegraphy and Telephony on Wednesday evening, Feb. 23, at Union. Refreshments.

FOUND.—A slide rule. Owner may have same by applying to C. R. Perry and paying cost of this adv.

Will the following men report in the lower Tech office Saturday at 1:00 P.M. in order to confer with the Society Editor on plans for the term: S. E. Bates, E. H. Guilford, E. W. Taft, L. G. Rendfrew and E. L. Macdonald.

NOTICE.—All Juniors who have not as yet signed their names under the Class Picture will please do so at once. The picture is on the Union Bulletin Board.

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UNION ENTERTAINMENT SUCCESSFUL AFFAIR

Mr. Kendall Amuses Fifty With Impersonations and Songs

Last night at the Union, fifty-one enjoyed one of the most entertaining evenings of the year. Mr. Fred E. Kendall gave a complete program of songs, impersonations, stories and jokes, every one of which was greatly appreciated and heartily applauded. The impersonations were perhaps the best, although Mr. Kendall's facial contortions were wonderful. He spoke in almost every dialect and imitated almost every kind of character, female as well as male. Interspersed among his yarns were songs sung in a baritone voice and varying from negro lullabies to love songs.

He started the program with a song entitled "Go to Sea," rendered with the help of Jack Martin at the piano. Then came what Mr. Kendall called "a little philosophical poem" called "Unselfish Dan," in which he impersonated an optimistic farm-hand speaking with a characteristic drawl. Marriage received its share of knocks next when, according to Mr. Kendall, a man once married was freely admitted to heaven because he had been through purgatory, but a man who had been twice married was refused entrance on the ground that "there must be no fools in Paradise." Following some other good knocks came an imitation of an old farmer at the bottom of the stairs calling to his family to get up. By simply disarranging his hair and putting on a pair of "specs" Mr. Kendall transformed himself into the sleepy-looking farmer and made you forget completely that he was dressed in evening clothes.

After singing a negro lullaby which was very appreciatively received, he told a number of funny stories. These were followed by the best single piece of the evening, the tale of a baseball pitcher under a life sentence in prison who saved the day and won the pennant for "Roscoe" and was then pardoned and brought to his sweetheart. Mr. Kendall's manner of telling this story and his impersonations of the sheriff and the warden are best described by the single word "great!" As a fitting sequence to this romance the performer sang "Love is the Light of the World," for which he received hearty applause.

The climax of the evening came with the performance of "An Important Debate." The debate was between two village sages on the question of who was the greatest man, "Napoleon Bonaparti" or Daniel Webster. One of the debaters stuttered very badly and his attempts to speak in a hurry brought forth whistles as often as words. The debate was never settled, however, because in the midst of one of the second speaker's spasms it was announced that there was a dog-fight on the common and the debating society broke up hurriedly. Mr. Kendall's impersonating powers were well brought forth in this final number and he was heartily applauded.

At the close of the entertainment, Gorton James 1910, chairman of the entertainment committee, announced that March 18th had been settled on as "Hook Night." He stated that the proposition had been made of allowing ladies to attend, and asked for a vote on this important question. Only one man had the courage to vote "aye" and it appeared that the ladies' party was sadly in the minority. On "Hook Night" the fellows are to go through various stunts of an amusing character. To make a success the stunts should be worked up in advance, and then they will get due credit for their performance.

GLIDER EXHIBITED

The glider of the M. I. T. AeroClub is on exhibition at the Airship Show now being held in Mechanics Hall. The machine occupies a prominent position in the main hall, and a large Techology banner is hung upon it.

The Harvard Club also has an exhibit of small models and pictures.

TECH SQUAD TO COMPETE AT LIGHT-GUARD MEET

Affair To Be Held At Medford Tonight--Relay Race Against Tufts

Technology will send a squad of men to the Lawrence Light Guard meet at Medford tonight. Entries have been made in the 35-yard dash, the 440-yard run, the 1000-yard run, the one-mile run, the 35-yard hurdles and the high jump. The two-mile relay team will run against Tufts. This meet is second only to the B. A. A. meet for athletes in New England. Besides Technology and Tufts, Harvard, Brown, Holy Cross and the Boston Athletic Association have entered men.

The relay race with Tufts will be of greatest interest to the Institute. Last year at this same meet Tech won from Tufts after a hard and fast race. The Technology team is this year as good, if not better than last year's team and a very close contest is expected. Tech will run P. D. White, Capt. L. O. Mills, C. P. Eldred and H. S. Benson. The Tufts men are the same as those who ran against Bowdoin at the B. A. A. Bowdoin defeated Tufts at that meet. These men are L. Swartz, Capt. W. H. Morrison, S. J. Heap and E. W. Richter. It is claimed that this team is the best Tufts has had for years.

The other entries are P. D. White, L. O. Mills, F. C. Dolke, J. S. Grant and S. E. Reed in the 35-yard dash, C. A. Read, R. B. McEwen and W. J. Pead, in the 35-yard hurdles, G. B. Cummings and M. A. Oettinger in the 440-yard run, J. P. Maxfield in the 1000-yard run, M. A. Oettinger in the mile-run, and E. Stuart and P. W. Dalrymple in the high jump.

In the short dash, E. E. Nelson and Carl Gram of the B. A. A., John Mather of the Somerville Y. M. C. A., and A. C. Porter of the Lynn Y. M. C. A., will be the low mark men. S. Lawrence of Harvard, H. A. Gidney of the B. A. A., P. W. Dalrymple of Tech and H. T. Johnston of Brookline High School are near the mark in the high jump. John Mather of Somerville, G. B. Cummings of Tech and E. R. Haddleton of Providence start close to the line in the 440-yard run. Bill Coe will make a special effort to break the record of 53 feet 3 inches made by Horner of Michigan with the 12-pound shot at the B. A. A. games last week.

WORK ON CONCRETE

Work On Theses Begun During Vacation Being Completed

The thesis work on Concrete, which is being carried on in the Applied Mechanics Laboratory, is progressing rapidly. Six reinforced concrete beams and a number of plain prisms were tested during the mid-year vacation, and the data obtained gives every promise of being very valuable.

The specimens which will be used to study the effect of proportioning concrete, and those for anchorage tests, have been made and will be tested shortly. The extremely cold weather in December made it necessary to construct these specimens at the Institute where the restricted space which was available for this work caused considerable delay. The original schedules however will be carried out.

The tests on the effect of loam in concrete are under way, but not enough results are available to say much about them. Tests on coke concrete and several other series of tests have been started, and the details of this work will be published after the data has been calculated.

Canca, Crete, Feb. 19.—A severe earthquake was felt throughout Crete at 6.38 this morning. It was accompanied with violent subterranean explosions. In this city a number of buildings were damaged and a minaret of the mosque crashed through the dome.

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ARCHITECTURE RELATED TO ANCIENT CIVILIZATION

By PROF. J. O. SUMNER.

Among the callings of which the Institute offers a professional training, architecture alone stands in close relation to the civilizations of the past. The science of one generation is superseded by that of the next and has thenceforth only an historical interest, but good art is never superseded and, in particular, this is true of architecture. The principles of form, of balance, of rhythm, are unalterable and are, as a rule, better exemplified in the simpler and more unified buildings of past ages than by those in which the complex demands of modern life have at all points to be considered and satisfied. Improved mechanical methods, too, while diminishing the labor and enormously increasing the possible quantity of architectural output, have been in many ways injurious to its quality. Details are no longer executed, to any appreciable extent, by craftsmen trained by lifelong practice not in mere mechanical repetition but in the freest and most delicate work. Perfected by successive generations of such handworkers, the mouldings and the carved and color ornament of the great epochs of art in the past are the necessary a. b. c. of the architect of today,—an alphabet in which variations, new combinations, and so new words and new meanings, are ever possible, but whose letters it would be as foolish to forget as it would be for the man who has new ideas to put into writings to forget the alphabet and grammar of his mother tongue.

So the student of architecture must be in perpetual communion with the work of the past, and even the practising architect is apt to grow more imitative rather than less so, and to repeat himself and become stilted and dull, if he ceases to draw refreshment and inspiration from the monuments in which the great styles reached their first perfection.

But the architecture of the past is only the cast-off cloak of the life of the past. It was that life which determined its forms and which gave it the spirit and manner which we describe as "style." People build with the materials which are accessible to them. The style of building depends in part upon the character of those materials. But its development is shaped by the habits and temperament of those who create it, and above all else, by their aspirations. It is no accident that every one of the three really distinct and complete styles in the history of European art, the Classical Greek, the Byzantine, and the Gothic, was formed in response to the needs of religion. The temple in the Greek, the domed church in the Byzantine, the vaulted cathedral in the Gothic, gave, in each case, the central problem through the working-out of which all the arts of construction and adornment, architecture, sculpture and painting, received that harmonious and related development which constitutes a true style.

Style being thus the expression, through the plastic arts, of the needs and aspirations, and, most subtle of all, the unconscious to the builders themselves, of the temperament of the people and the age which created it, the student of the architect who knows only one of these arts apart from the rest, and who is unfamiliar with the literature, the history, and the life of the period whose manner building and decoration he appropriates, is seldom able to work in the spirit of the style. How-

ever skilfully he may imitate and adapt its external forms he is almost certain to use them unintelligently and in a piecemeal, inorganic manner.

The desirable breadth of fullness of knowledge of the great creative epochs of the past cannot, it should be needless to say, be established through one or two academic courses. But some idea of the conditions and life of these epochs and a guiding thread of history which will connect them together may be so imparted, and should serve, for students who are in earnest with their art, as a point of departure for fuller and more mature study of the periods whose work specially interests them. To accomplish this is the primary purpose of the courses in the History of European Civilization and Art.

While pursuing the general aim thus described, a special effort is made, in these courses, to familiarize the student with the development and with the more famous masterpieces of sculpture and painting, arts which express in concrete form the life and spirit of their time and which are always intimately associated with its architecture. In addition to the illustration of these courses by several thousand lantern-slides and photographs the magnificent collections of original works in the Museum of Fine Arts and in Fenway Court are readily accessible, and it is hoped that the better disposition of time which goes into effect after the present year may make it possible to utilize these resources more fully.

OFFICE TRAINING

(Continued from page 37.)

common sense supply, and he will lay down a life method of procedure. The ideal he must consider is the right kind of success in his profession which must come from his practical qualifications of backbone and common sense, and from the added moral one of loyalty which covers all others. Loyalty to office and employer means loyalty to self and client. Loyalty to self means that his self cultivation must never stop, that his abilities are to be used, and improved and added to.

Every good office is inspired by a strong "esprit de corps" and fine traditions, and in such an office where his fortunes begin, the young draughtsman must help extend these, and show quality and quantity of work, and herein is the finest training for the position he intends finally to occupy, that of a practising architect.

Another point well worth remembering is that training in a fine office gives reputation to a draughtsman, so that he need never be out of employment so long as he has a sane mind in a sane body. It will take him some years to apply effectively what he has learned with us,—to convert his theoretical knowledge into actual facts. But when he can fall back on his theoretical knowledge to justify his practice, or vice versa, and can call to his assistance both his scientific knowledge and his experience, he will find himself in a happy condition. Let the young draughtsman be in no hurry to commence practice for himself. The ideal start would be when he is strong enough to carry the traditions of the office in which he has served with him,—until he feels capable of continuing the class of work he has been engaged on in another architect's employ. Character is shown ten times over in the man who believes he should be prepared before he is to be trusted, than in the man with the false impression that success is measured by the time his "shingle" has been exposed to the public view.

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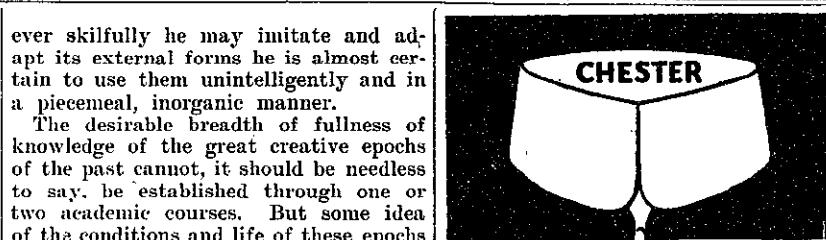
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